

NATURAL RESOURCES CONSERVATION SERVICE

VIRGINIA CONSERVATION PRACTICE STANDARD

FISHPOND MANAGEMENT

(Acre)

Code 399

DEFINITION

Managing impounded water for the production of fish or other aquatic organisms (non-commercial use).

PURPOSES

- To provide favorable habitat for fish and other aquatic organisms.
- To develop and maintain a desired species composition.
- To develop and maintain desired population levels.

CONDITIONS WHERE PRACTICE APPLIES

In warm and cold water ponds, lakes, and reservoirs where fish and other aquatic species are desired for domestic or recreational use.

This practice does not apply to managing ponds as commercial aquaculture facilities. Contact a person who is trained in this specialty. Virginia State University in Petersburg, Virginia and Virginia Tech in Blacksburg have extension departments that deal with this subject.

CRITERIA

GENERAL CRITERIA APPLICABLE TO ALL PURPOSES

Structures will meet or exceed the requirements in Virginia Conservation Practice Standard *Pond* (Code 378), including environmental requirements. New ponds used for fish production should have at least 70% of their bank perimeter constructed and maintained to a minimum depth of three feet to help limit growth of excessive aquatic plants.

All Federal, State, and local regulations will be followed and necessary permits obtained prior to stocking, etc. (See the Virginia Department of Game and Inland Fisheries' publication "Management of Virginia Ponds for Fishing" for details. If triploid grass carp are considered to control excess aquatic plants, a permit must first be obtained from the Virginia Department of Game and Inland Fisheries (VDGIF).

Do not recommend species that are considered invasive or may become invasive in surrounding waters.

ADDITIONAL CRITERIA TO PROVIDE FAVORABLE HABITAT FOR FISH AND OTHER AQUATIC ORGANISMS

Fishpond management techniques shall be selected to accomplish the intended purpose of the practice, given the conditions of the site and the objectives of the landuser.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

Species selected for stocking shall be suited to the water temperatures and other water quality criteria that can be met in the pond. Only species that are legal for stocking in Virginia shall be used.

To the extent feasible, plant and animal pest species shall be controlled to maintain the intended purpose of the pond. Preference shall be given to controlling undesirable plants by non-herbicide methods, such as by using non-toxic dyes, physically removing the plants, reducing nutrient loading, or other natural controls.

The site will be protected from flooding, sedimentation, and contamination. The entire pond, including fill, borrow, and spillway areas will be fenced from livestock access.

Excessive amounts or aggressive species of aquatic vegetation shall be controlled. Note however, that all aquatic plants cannot and should not be eliminated. Twenty to thirty percent coverage is desirable to pond fish populations.

ADDITIONAL CRITERIA TO DEVELOP AND MAINTAIN A DESIRED SPECIES COMPOSITION AND RATIO

Species for stocking will be limited to those that are adapted for use in ponds, lakes, or reservoirs. In Virginia, stockable fish shall normally be limited to bluegill and redear sunfish, largemouth bass and channel catfish in warm waters. Only rainbow trout will be stocked in ponds that maintain less than 70° F temperatures.

Ponds for good, balanced multi-species fishing should be at least 1 acre in size. Any fishponds less than 1 acre are best managed by stocking only channel catfish. See the VDGIF publication, "Management of Virginia Ponds for Fishing" for specific stocking instructions.

To maintain the desired species composition and species ratios, a plan will be developed with the client to evaluate future species composition and species ratios through observations, seining, and catch records.

ADDITIONAL CRITERIA TO DEVELOP AND MAINTAIN A DESIRED LEVEL OF PRODUCTION

The desired level of production shall be maintained by following the guidance provided in the publication "Management of Virginia Ponds for Fishing". Additional guidance can be obtained by consulting

with VDGIF or NRCS biologists, or others knowledgeable of fish biology.

CONSIDERATIONS

The following items must be considered when managing a fishpond:

1. Purpose of management, including the fish species present or desired, and the amount of fishing currently conducted or desired;
2. Pond size, depth, and age;
3. Surrounding landscape and its relationship to the pond, especially as it relates to delivery of nutrients, sediments, and other contaminants into the pond. Note that limiting offsite nutrients can result in reduced need for nuisance plant control;
4. Site conditions such as soils, available water sources, water quality and quantity, and existing vegetation;
5. The presence of undesirable plants and animals in the pond;
6. Regulatory requirements for activities such as herbicide treatment of aquatic weeds, and excavation of accumulated sediment. Note that permit consultation with the Corps of Engineers must be made prior to removal of sediments or potential impacts on wetlands;
7. Other constraints such as recurring costs, availability of equipment, access to the site, social effects, and visual aspects such as compatibility with the natural landscape.
8. Consider deepening as much as possible the edges of *existing* ponds to improve fishing. Creating at least 3 feet of steep water depth at the ground – waterline helps to limit growth. Be sure to properly dispose of materials so as not to impact wetlands or create excessive sediment.
9. Consider the use of native species.
10. Consider providing additional fish and wildlife habitat within or around the impoundment for cover and breeding purposes that will not compromise the integrity of the structure or the purpose of this practice.

Refer to VDGIF's publication, "Management of Virginia Ponds for Fishing" for additional considerations.

PLANS AND SPECIFICATIONS

Plans and specifications for fishpond management shall be prepared in accordance with the previously listed criteria. Plans and specifications shall contain sufficient detail to ensure successful implementation of this practice.

Based on the physical and biological conditions of the pond, specify management actions that will best meet the landuser's objectives. Management recommendations may concern only one aspect of fishpond management, such as weed control, or may involve a comprehensive plan that includes stocking rates, harvesting rates, weed control, and other activities.

Refer to VDGIF's "Management of Virginia Ponds for Fishing" for specifications concerning the following topics:

1. Pond size and depth;
2. Stocking combinations, timing, and harvesting rates;
3. Inventorying fish populations. Note that private fish consultants provide this service;
4. Reducing or eliminating fish populations;
5. Management of water quality including fertilization and liming;
6. Controlling aquatic plants and other pond problems. Any herbicide applications must meet Virginia Pest Management Guide, Aquatic Weeds Section Guidelines.

The landuser's decisions shall be recorded for each site in a management plan. This plan can be written directly into the conservation plan, or incorporated into the conservation plan by referring to a job sheet or a separate fishpond management plan (e.g., a plan developed by a VDGIF Fisheries Biologist, NRCS Biologist, or other professional biologist).

Requirements for the operation and maintenance of this practice shall be incorporated into site specifications.

CHECK DATA

The following is a list of the minimum data and documentation to be recorded in the case file:

1. Field location of the pond and acres, and assistance notes. Also note the location of the pond on the conservation plan map;
2. Management plan, completed copy of the appropriate Job Sheet(s), or copy of the "Management of Virginia Ponds for Fishing" pamphlet, if used.

OPERATION AND MAINTENANCE

An operation and maintenance (O & M) plan shall be prepared for each fishpond management site. Appropriate Job Sheet(s) or other documentation may be used to serve as the management plan as well as supporting documentation, and shall be provided to the landuser. At a minimum, the following components shall be addressed in the O & M plan, as applicable:

FISHPOND STOCKING

Describe the species that were selected for stocking, stocking rates, sizes of fish to be stocked, and the month and year when each species will be stocked.

MANAGEMENT AND MAINTENANCE OF ANIMAL AND PLANT POPULATIONS

Describe the ongoing measures that must be followed.

FREQUENCY OF INSPECTIONS

At a minimum, require annual inspections of the pond, including its fish population and its structural components.

REFERENCES

1. Virginia Cooperative Extension, Virginia Pest Management Guide – “Horticultural and Forest Crops”, Aquatic Weeds Section.
2. Virginia Department of Game and Inland Fisheries, “Management of Virginia Ponds for Fishing”.

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FISHPOND MANAGEMENT

Approved Practice Narrative

(Acre)

CODE 399

399 D1 Fishpond Management: The pond indicated on the plan map will be managed to maintain a balanced population of harvestable fish. Specifications, as well as an operation and maintenance plan will be provided.

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